

XIX. *Descriptions of three new Genera of exotic Coleoptera.*

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THE three insects which form the subject of the present communication are worthy of attention, on account of their severally presenting an external resemblance to groups to which naturally they do not belong. The first of these beetles has in fact been mistaken for a small species of *Lucanidæ*, to which family however it only bears a relation of analogy, whilst in affinity it is naturally very closely allied to the genus *Ips*. The second species has a very close primâ facie resemblance to the heteromorous genus *Cossyphus*, and yet it possesses no real relation thereto; and the third species is most nearly related to *Trogosita*, although its slender filiform antennæ and general form give it the appearance of some of the smaller *Scaritidæ*.

These analogical resemblances are highly interesting, on account of the clue which they have been supposed to afford to the natural classification of the groups to which, by affinity, they belong, and as indicating, by parallelism, the precise position of these analogous species or genera in the respective families to which they belong.

PAROMIA, Westw. Gen. Nov.

Corpus oblongum, subdepressum, parallelum, postice rotundatum. *Caput* porrectum, horizontale, pronoto parum angustius, parte antica angustata, longitudinaliter sulcata. *Labrum* minutum, porrectum, angulis anticis rotundatis, ciliatum. *Mandibulæ* porrectæ elongatæ, apice curvatæ bifidæ, intus ciliatæ. *Maxillæ* transversim insertæ, lobo unico apicali elongato, valde setoso, obtuso inermi. *Palpi* maxillares lobo vix longiores, articulo basali minimo, haud in tuberculum elongatum insidenti; articulisque intermediis brevibus obconicis, apicali longiori, apice parum attenuato. *Mentum* transversum corneum, basi paullo latius, angulis anticis rotundatis. *Labium* breve et angustum, margine antico parum emarginato. *Palpi* labiales minuti, subfiliformes; articulo basali minimo, 3tio elongato ovali, lingua e laciniis duabus elongatis ultra marginem anticum labii exsertis, setosis divaricatis compressis formata; maxillarum lobo ciliato ad latera laciniarum (insecto quiescenti) applicato. *Antennæ* breves, 11-articulatæ, clava 3-articulata, articulo ultimo mamilla parva terminali instructo; singula in canali laterali faciei inferæ capitis recepta. *Prothorax* brevis transversus, angulis anticis porrectis, lateribus

fere rectis. *Prosternum* retro porrectum et supra mesosternum paullo productum, apice rotundatum. *Metasternum* basi tenuissime canaliculatum. *Pedes* parum elongati, tibiis inermibus, tarsis 5-articulatis, subtus setosis, articulis tribus basalibus parum cordatis, 4to minuto, unguibus acutis, pulvillo parvo bisetoso intermedio instructis. *Abdomen* 5-articulatum, articulo basali majori.

The chief difference between this genus and *Ips*, its most decided ally, consists in the large size of the type (being nearly three quarters of an inch long, whilst the species of *Ips* rarely exceed one-fourth of an inch), the advanced structure of the anterior parts of the head, whereby the labrum becomes porrected (thus disagreeing with one of Erichson's three characters* of the family *Ipina*); the mandibles falcated, and by the canaliculated front of the head. The maxillary palpi do not arise from a long basal scape as in *Ips*. The "instrumenta labialia" closely resemble those of *Ips*, but less so those of *Pityophagus ferrugineus*,† Shuckard, in which last the mentum is much narrowed at the base.

Sp. unica. *Paromia Dorcoides*, Westw. (Pl. XIII., fig. 1, and details.)

P. nigra, nitida, elytris castaneis, basi parum luteis, apice nigris, maculis duabus subapicalibus fulvis.

Long. corp. lin. $8\frac{1}{4}$ (cap. cum mand. $2\frac{1}{4}$, prothoracis 2, elytror. 4). Habitat in Columbia. In Mus. D. Reich. Paris.

Caput antice et versus angulos posticos punctatum, linea media longitudinaliter impressum ultra medium verticis obsoleta, impressione altera tenuissima intus oculos et marginem posticum extensa; pronotum tenuissime marginatum. Elytra ad apicem plaga magna nigra antice in medio producta notata, in quâ maculæ duæ transversæ subapicales fulvæ.

COSSYPHODES, Westw. Gen. Nov.

Corpus minutum, latum, subparallelum, antice et postice rotundatum, valde depressum, marginatum et in medio longitudinaliter elevatum et carinatum. *Caput* semicirculare, fere planum, margine laterali paullo elevato, utrinque versus angulos pos-

* "*Labrum occultum*." Germar, Zeitsch. iv. 355.

† Mr. Curtis has unfortunately drawn his generic characters of *Ips* from this species; it is, however, certainly, if belonging to the genus *Ips* at all, a most aberrant species. Mr. Curtis's figure of the "instrumenta labialia" (Brit. Ent. pl. 306, fig. 4) gives no idea of the real structure of this part of the mouth, and omits the paraglossæ or lacinie of the lingua.

ticos impressione parva longitudinali obliqua instructum. Subtus genæ utrinque porrectæ, fossulas duas pro receptione antennarum formantes. *Oculi* haud detecti, vel in fossulis duabus longitudinalibus disci reconditi. *Antennæ* brevissimæ geniculatæ, sub marginem lateralem capitis insertæ et in canali, genis utrinque formato, insidentes, clavatæ, 11-articulatæ, articulo basali magno elongato ovali, 2^{do} parvo breviter ovali, 3^{tio} ad 9^{um} brevissimis transversis, duobus apicalibus magnis conjunctim coarctate applicatis, clavam subsolidam biarticulatam ovalem formantibus. *Labrum* sub clypeo absconditum transversum, angulis anticis rotundatis ciliatum. *Mandibulæ* breves, crassæ, corneæ, subtriangulares, sub apicem incisæ, et inde bidentatæ. *Maxillæ* parvæ, extus tuberculo porrecto (basin palporum defendente) armatæ, intus ad apicem lobis duobus distinctis longe ciliatis instructæ. *Palpi* maxillares lobis longiores in tuberculo parvum insidentes, articulis duobus intermediis brevibus latis, 4^{to} multo longiori et subovali. *Mentum* subquadratum, basi parum angustatum, lateribus in medio emarginato-incisis. *Labium* breve, mento multo angustius, angulis lateralibus anticis ciliatis. *Palpi* labiales minuti in scapos duos crassos breves, cum facie externa labii connatos, insidentes; articulis 1 et 2 minutis, 3^{tio} longiori, apice subacuminato. *Prothorax* transversus antice paullo angustior, lateribus parum rotundatis et recurvis, dorso in medio longitudinaliter elevato, carinisque tribus gracilibus utrinque notato. *Prosternum* breve elevatum subcuspidatum. *Scutellum* haud visibile. *Elytra* ovalia, depressa, lateribus acutis elevatis, medio elevato, singulo carinis tribus carinis prothoracis continuis lineaque altera tenuissima submarginale instructo. *Alæ* nullæ. *Metasternum* brevissimum. *Abdomen* utrinque marginibus inflexis elytrorum circumcinctum, 5-articulatum, segmentis sensim longitudine decrescentibus. *Pedes* brevissimi, valde compressi. *Femora* lata elongata ovalia. *Tibiæ* angustiores in femora subtus, quiescentes, replicatæ, calcaria minuta. *Tarsi* breves, subtus setosi, anticis 5-(vel 4?) articulati, intermedii 4-(vel 5?), postici 4-articulati, articulo penultimo præcedenti vix minori.

This is altogether one of the most anomalous genera hitherto described among Coleopterous insects. At first sight it possesses so strong a resemblance to the heteromerous genus *Cossyphus*, that it was for a time regarded merely as a minute species of that genus, for the outline of the head and pronotum are nearly continuous, so that it was not until a more careful examination was made that the ordinary exposed condition of the head and its divi-

sion from the prothorax was observed. The tarsi are not, however heteromerous.* The structure of the antennæ, moreover, at once removes this genus from the whole of the *Heteromera*, since they are elbowed at the extremity of the large first joint, and have a nearly solid 2-jointed terminal club. It is, I apprehend, among the genera originally placed by Latreille among the *Xylophaga* (but separated therefrom by Mac Leay, by whom they were introduced among the *Necrophaga*), that we must look for the true relations of this insect, some of which are already known to exhibit various numerical peculiarities in respect to the joints of their tarsi, often varying in the sexes in this respect. *Biphyllus*, as the name implies, has a 2-jointed clava to the antennæ, and some of the species of *Cerylon* have similarly polished bodies. *Bitoma* has also a biarticulate club to the antennæ, as well as a carinated pronotum and elytra. This last-named genus, in fact, notwithstanding the various very striking points of disagreement with *Cossyphodes*, may perhaps be regarded as most nearly allied to it of any known genus; indeed the parts of the mouth of *Bitoma*, as figured by Mr. Curtis (Brit. Ent. pl. 283), present a strong general conformity with those of *Cossyphodes*.

Sp. unica. *Cossyphodes Wollastonii*, Westw. (Pl. XIII., fig. 2, and details.)

C. totus castaneus, immaculatus, lævis, subnitidus; antennis, palpis pedibusque concoloribus.

Long. corp. lin. $1\frac{1}{2}$.

Habitat sub lapidem ad littus insulæ Maderæ. D. Wollaston.

The head has a small transverse slightly raised space near the anterior margin, beneath which the mouth is inserted. I have been unable to detect any traces of the eyes, although there is on each side of the disc of the head, extending to the front of the pronotum, an impressed line, in which the eyes may be concealed. The outline of the head, prothorax, and elytra is nearly continuous, as are also the three delicate carinæ on each side of the raised middle longitudinal line of the prothorax and elytra.

A single specimen of this most remarkable insect was discovered by T. Vernon Wollaston, Esq., under a stone on the shore of the

* Strictly speaking the tarsi are heteromerous, that is, they do not consist of the same number of joints in all the legs; but in the true *Heteromera* the four anterior tarsi are 5-jointed, and the two posterior tarsi are 4-jointed; but in the genus before us four of the tarsi are 4-jointed, and only one pair 5-jointed. I am unfortunately unable to state whether it is the anterior or intermediate pair of tarsi which are 5-jointed, having detached the legs, but the hind pair are certainly 4-jointed.

island of Madeira during his first visit. The species must however be extremely rare or very local, as he failed to detect it again during his second visit, although he repeatedly searched the adjoining neighbourhood with that object in view.

CHÆTOSOMA, Westw. Gen. nov.

Corpus oblongum, angustum, parallelum, subcylindricum, dorso subdepressum, punctatum, longe setosum. *Caput* porrectum, subquadratum, latitudine pronoto æquale. *Clypeus* transversus, brevis. *Labrum* breve, angulis anticis lateralibus rotundatis, medio antice subemarginatum. *Mandibulæ* magnæ, corneæ, exsertæ, elongato-trigonæ, apice subhamato, intus dentibus duobus obtusis armatæ. *Maxillæ* e lobis duobus setosis latis obtusis formatae, interno haud spina armato. *Palpi* maxillares maxillis fere duplo longiores, articulo basali minuto; 2do et 3tio æqualibus, apice parum crassioribus, 4to præcedenti paullo longiori et crassiori, sensim incrassato, apice obtuso. *Mentum* breve transversum, in scapum corneum juguli insertum, lateribus rotundatis, medio late emarginatum. *Labium* porrectum, profunde emarginatum vel fere bifidum, margine antico setoso. *Palpi* labiales in scapos duos latos insidentes, articulo basali breve, secundo fere triplo longiori, 3tio longitudine 2di, subovali, apice oblique truncato. *Antennæ* subfiliformes, fere longitudine capitis et pronoti, longe setosæ, articulo 1mo brevi subrotundato, 2ndo brevissimo, 3tio ad 10mum fere æqualibus basi singulatim angustato, 11mo præcedenti vix longiori subovali. *Pronotum* subquadratum, lateribus fere rectis, dorso rude punctatum, elytris paullo angustius. *Elytra* oblonga, basi truncata, apice rotundata, angulis humeralibus acute prominentibus. *Pedes* longitudine mediocres, femoribus crassis, tibiis e basi ad apicem sensim incrassatis subtriquetris. *Tarsi* omnes 5-articulati, articulis 4 basalibus brevibus infra setosis integris, 5to multo longiori clavato. *Ungues* basi intus dilatato, vix dentato. *Pulvillus* brevis bisetosus.

This genus, in its general form, porrected mandibles, filiform antennæ, and rather elongated legs, with their five-jointed tarsi, might at first sight be almost mistaken for some of the narrow *Harpalidæ* or *Scaritidæ*, but an inspection of the parts of the mouth (those most excellent guides in determining the relations of the families of insects in general, and *Coleoptera* in particular), is sufficient to prove that the insect must be referred to the great group to which Mr. MacLeay has applied the name of *Necrophaga*,

and it is I apprehend amongst these, in the neighbourhood of *Trogosita*, *Cucujus* and *Passandra*, that we must look for the natural situation of the genus before us. From *Trogosita* it is, however, distinguished by the bilobed maxilla, the elongated lobes of the labium, the filiform antennæ, and the 5-jointed tarsi. In several of these respects it approaches much nearer to the *Cucujidæ*.

The remarkably long setæ with which the sides of this insect are furnished seem to indicate some peculiarity in its habits with which we are unacquainted. Such setæ appear in some groups, especially the Geodephagous *Coleoptera* and Fossorial *Hymenoptera*, to be accompanied by very predaceous habits, and, judging from the powerful mandibles of the insect before us, I should not be surprised if such are the habits of this insect.

Chætosoma Scaritides, Westw. (Plate XIII., fig. 3, and details.)

Nigra, nitida, punctata, longe setosa; elytrorum basi late, apiceque cum pedibus rufis.

Long corp. lin. $4\frac{1}{2}$.

Habitat in Nova Zelandia. In Mus. Westwood.

Lævis, nitida, supra rude et irregulariter punctata, tota nigra; elytrorum basi et apice pedibusque rufis exceptis. Caput antice magis punctatum, ibique prope clypeum in canali sinuato transversim impressum. Pronotum canali tenuissimo longitudinale medio, hujus lateribusque pronoti magis punctatis, spatio utrinque longitudinali lævi relicto, margine postice impressionibus duabus sat profundis, versus angulos posticos alteraque media marginem posticum haud attingente. Elytra rude et vage punctata, setis longis lateralibus porrectis instructis.

DESCRIPTION OF THE FIGURES.

PLATE XIII.

- Fig. 1. *Paromia Dorcoides*, mag. nat. 1 a, head and mandibles, seen from above; 1 b, head, with the instrumenta labialia, antenna and mandibles, seen from beneath; 1 c, maxilla; 1 d, instrumenta labialia, seen from within the mouth, with one of the maxilla in situ; 1 e, underside of the thorax and abdomen; 1 f, 1 g, posterior tarsus in different positions.
- Fig. 2. *Cossyphodes Wollastonii* magnified. 2 a, labrum; 2 b, 2 c, mandibles; 2 d, maxilla; 2 e, instrumenta labialia, seen from the outside of the mouth; 2 f, antenna; 2 g, head and prothorax, seen from below; 2 h, meso- and meta-sterna and abdomen, seen from below; 2 i, hind leg; 2 k, anterior (or middle) leg; 2 l, middle (or anterior) tarsus.
- Fig. 3. *Chætosoma Scaritides* magnified. 3 a, head and antenna, seen from above; 3 b, head, seen from below; 3 c, front of head, seen from above; 3 d, maxilla and instrumenta labialia from beneath; 3 f, fore leg; 3 g, angues and pulvillus.